APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,991	10/15/2001	Neil John Hursey	NAI1P486/01.060.01	9572

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EXAMINER
TO, BAOTRAN N

ART UNIT	PAPER NUMBER
2135	

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08/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

/

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/975,991	HURSEY ET AL.
	Examiner	Art Unit	
	Baotran N. To	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>04/30/2007</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-10,12-18 and 20-31</u> is/are pending in the application.

    4a) Of the above claim(s) <u>3, 11, and 19 (Canceled)</u> ~~is/are withdrawn from consideration.~~

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-2, 4-10, 12-18, and 20-31</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office action is responsive to the Applicant's Amendment filed 04/30/2007.

Claims 1, 6, 9, 14, 17, 22, and 25 are amended.

Claims 28-31 are newly added.

Claims 3, 11, and 19 are canceled.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-2, 4-10, 12-18, and 20-31 have

been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-2, 4-5, 7-10, 12-13, 15-18, 20-21, 23-27 and 31 are rejected under 35

U.S.C. 103(a) as being unpatentable over Caronni et al. (U.S. Patent Application

Publication 2002/0143850 A1) hereinafter Caronni in view of Cochran "Inside the

Exchange Server Antivirus API" September 07, 2001, hereinafter Cochran.

Referring to Claims 1, 9 and 17, Caronni discloses a computer program product

for controlling operation of a computer to detect malware, said computer program

product comprising:

pending scan database code operable to maintain a pending scan database **(the**

progress indicator is linked to a data resource 240. Example of data resources

comprise databases (e.g. relational database), flat files, a hash table and any data

storage media) (Figure 2, element 240 and paragraph 0029) storing data identifying

computer files that have been written to a data storage device (Figure 4, element 412)

and for which a scan for malware has yet to be performed **(Processor 413 may**

execute the received code as it is received and/stored in mass storage 412)

(paragraph 0057) (a system for scanning incoming data for viruses. The system

comprises one or more processing nodes that have access to a library of virus

signature (data source) (Figures 2-4, and paragraph 0029); and

scanning code operable as a low priority task within a multitasking environment

(a data processing node may run low on memory due to high volume of incoming

data. In this example, the processing node may be configured to suspend virus

scanning and reroute the processing to a different processing node with available

resource) (paragraphs 0030), (Once the processing is complete, the device is

tasked with other higher priority jobs, or the device elects to stop processing

prior to completely processing the packet data) (paragraph 0035) to conduct

malware scanning upon computer files identified within said pending scan database

storing data identifying computer files (files) that having been written to said data

storage device and for which the scan for malware has yet to be performed **(a system for scanning incoming data for viruses. The system comprises one or more processing nodes that have access to a library of virus signature (data source). Such a library may be stored in the relational database, flat file, hash table or obtained from a server. Each node is enabled to access the virus signature library and scan the data the presence of any of the virus signatures. In this example, the progress indicator contains a reference or a pointer to the virus signature being scanned)** (Figures 2-4, paragraph 0029-0030 and 0035).

Caronni explicitly does not disclose "file read code operable in response to a read request for a computer file identified within said pending scan database to trigger said scanning code to scan said computer file as a high priority task with a first priority that is higher than a second priority of said low priority task, before permitting read access to said computer file."

However, Cochran clearly discloses file read code operable in response to a read request for a computer file identified within said pending scan database to trigger said scanning code to scan said computer file as a high priority task with a first priority that is higher than a second priority of said low priority task, before permitting read access to said computer file (paragraph 0003).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Cochran's reference within Caronni to include file read code operable in response to a read request for a computer file identified within said pending scan database to trigger said scanning code to scan said

computer file as a high priority task with a first priority that is higher than a second

priority of said low priority task, before permitting read access to said computer file. One

of ordinary skill in the art would have been motivated to do so because it would improve

on demand and background scanning (Cochran, paragraph 0003).

Referring to Claims 2, 10 and 18, Caronni and Cochran disclose the limitations

as discussed in Claims 1, 9 and 17 above. Caronni further discloses file write code

operable as a computer file is written to a storage device to add data identifying said

computer file to said pending scan database (paragraph 0030).

Referring to Claims 4, 12 and 20, Caronni and Cochran disclose the limitations

as discussed in Claims 1, 9 and 17 above. Caronni further discloses scanned file

database code operable to maintain a scanned file database storing data identifying

computer files that have been scanned for malware (paragraph 0029).

Referring to Claims 5, 13 and 21, Caronni and Cochran disclose the limitations

as discussed in Claim 4 above. Caronni further discloses wherein said data identifying

computer files that have been scanned for malware includes checksum data derived

from said computer files that were scanned (paragraph 0049).

Referring to Claims 7, 15 and 23, Caronni and Cochran disclose the limitations

as discussed in Claim 4 above, Cochran further discloses initiation code operable upon

startup to detect any computer files stored on a storage device not included within either said pending scan database or said scanned file database and to add such computer files to said pending scan database (paragraph 0003).

Referring to Claims 8, 16 and 24, Caronni and Cochran disclose the limitations as discussed in Claim 1 above, Caronni further discloses wherein said malware comprises one or more of: a computer file infected with a computer virus; a Trojan; a banned computer file; and a computer file containing banned content (paragraph 0029).

Referring to Claim 25, Caronni and Cochran disclose the limitations as discussed in Claim 1 above, Caronni further discloses wherein an order of said computer files identified within said pending scan database being scanned is based on an algorithm that estimates the likelihood of said read request being performed on each computer file (paragraph 0003).

Referring to Claim 26, Caronni and Cochran disclose the limitations as discussed in Claim 4 above, Cochran further discloses wherein only computer files determined to be clean from malware scanning are stored in the scanned file database (paragraph 0003).

Referring to Claim 27, Caronni and Cochran disclose the limitations as discussed in Claim 1 above, Caronni further discloses wherein an order of said computer files

identified within said pending database being scanned is based on the order in which said computer files were placed in said pending scan database (paragraph 0029, 0030 and 0035).

Referring to Claim 31, Caronni and Cochran disclose the limitations as discussed in Claim 1 above, Cochran further discloses wherein said second priority of said low priority task is determined based on a predetermined time period (paragraph 0003).

4.   Claims 6, 14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caronni and Cochran and further in view of Kephart et al. (U.S. Patent 5,613,002) hereinafter Kephart.

Referring to Claims 6, 14 and 22, Caronni and Cochran disclose the limitations as discussed in Claim 5 above, Caronni and Cochran further disclose wherein said file read code is further operable in response to said read request for said computer file to detect if said computer file is within said scanned file database (Cochran, paragraph 0003), but explicitly do not disclose to recalculate a checksum value for said computer file, and to determine that said recalculated checksum value matches a stored checksum within said scanned file database before permitting said read request. However, Kephart explicitly discloses to recalculate a checksum value for said computer file, and to determine that said recalculated checksum value matches a stored checksum within said scanned file database before permitting said read request

(Figures 2a and 2b, col. 4, line 55 - col. 5, line 35). Accordingly, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to have

incorporated Kephart's reference into Caronni and Cochran to include to recalculate a

checksum value for said computer file, and to determine that said recalculated

checksum value matches a stored checksum within said scanned file database before

permitting said read request. One of ordinary skill in the art would have been motivated

to do so because it would protect files in database.

5.   Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Caronni and Cochran and further in view of Chen et al. (U.S. Patent 5,832,208)

hereinafter Chen.

Referring to Claim 28, Caronni discloses the limitations as discussed in Claim 1

above, Caronni further discloses wherein if said scanning code determines that said

computer file is clean, said data identifying said computer file is removed from said

pending scan database. Caronni and Cochran explicitly do not disclose wherein if said

scanning code determines that said computer file is clean, said data identifying said

computer file is removed from said pending scan database. However, Chen explicitly

discloses wherein if said scanning code determines that said computer file is clean, said

data identifying said computer file is removed from said pending scan database (Figure

3, col. 7, lines 20-67). Accordingly, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to have modified Chen's reference to include

wherein if said scanning code determines that said computer file is clean, said data identifying said computer file is removed from said pending scan database. One of ordinary skill in the art would have been motivated to do so because it would detect and remove computer virus (Chen, col. 5, lines 4-5).

Referring to Claim 29, Caronni and Cochran disclose the limitations as discussed in Claim 1 above, Caronni and Cochran explicitly do not disclose wherein actions are triggered if said scanning code determines that said computer file is not clean. However, Chen explicitly discloses wherein actions are triggered if said scanning code determines that said computer file is not clean (Figure 3, col. 7, lines 35-67). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chen's reference to include wherein actions are triggered if said scanning code determines that said computer file is not clean. One of ordinary skill in the art would have been motivated to do so because it would detect and remove computer virus (Chen, col. 5, lines 4-5).

Referring to Claim 30, Caronni, Cochran and Chen disclose the limitations as discussed in Claim 29 above, Chen further discloses wherein said malware actions include at least one of file cleaning, file quarantining, file deletion, and alert message issuing (Figure 3, col. 7, lines 35-67).

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
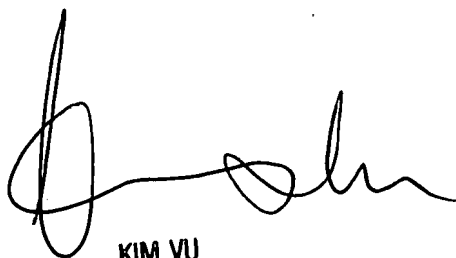
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baotran N. To whose telephone number is 571-272-8156. The examiner can normally be reached on Monday-Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BT
08/17/2007

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